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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,417	02/14/2005	Hiromitsu Takeda	050034	4544

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EXAMINER	
JOY, DAVID J	

ART UNIT	PAPER NUMBER
1774	

MAIL DATE	DELIVERY MODE
05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,417	TAKEDA ET AL.	
	Examiner	Art Unit	
	David J. Joy	1774	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/14/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Strickler et al. (6,858,306; hereinafter "Strickler"), in view of the U.S. Patent of Oliver et al. (4,797,317; hereinafter "Oliver").

5. Strickler teaches a visible light absorbing film formed by coating one or both sides of a substrate which has solar radiation reflecting properties and whose visible light reflectance is 10% or more (see Abstract; see also Figure 2; see also Column 2, Lines 14-24). Strickler specifically teaches that the coated glass article has a visible light transmittance of 63% or more, but Oliver recites that a light transmission on the order of 20-30%, for example, implies reflectivity of 70-80% (see Column 2, Lines 67-68). Therefore, it follows that the coated article of Strickler can be deemed as having a visible light reflectance of 10% or more. Additionally, Strickler teaches that the coated article exhibits both a reduction in both the visible light reflectance and the solar radiation reflectance (see Column 6, Lines 28-56). Also, the coated article exhibits a haze value that has been made higher than the haze value before formation of the visible light absorbing film and its gain is +3% or less; specifically, the coated article exhibits a haze of less than 0.8% (see Column 5, Lines 20-30).

6. Strickler teaches that the coated article has a c* value of 40 or less. In particular, Strickler recites that the article has an a* value of about 5 to about –5 and a b* value of about 5 to about –5, as defined on the CIELAB color scale system (see Column 5, Lines 20-30). Consequently, using the chromaticness formula claimed in the instant application, it follows that these a* and b* values result in the claimed c* value. Strickler also teaches that the substrate is a glass sheet on which a metallic thin film has been formed (see Figure 2), and that the coating is incorporated directly or via an intervenient member or via a space (*Id.*).

7. Strickler is silent as to some of the specifics of the coated article. Most notably, Strickler fails to teach the nature of the metallic thin film as well as the specific contents of the tinted film. However, Oliver, drawn a solar control window film, teaches a composite film sheet laminated to a glass substrate (see Abstract), with the film sheet being a polymeric film onto which a metallic thin film of aluminum has been vacuum-deposited (see Column 3, Line 65 – Column 4, Line 2; see also Column 6, Lines 52-54), and additionally, the film sheet can contain a carbon black pigment and a binder (see Column 4, Lines 3-14). Similarly, Oliver recites that the window film has a visible light reflectance of 10% or more (see Abstract; see also Column 3, Lines 29-42). As both the

Strickler reference and the Oliver reference are drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention, to have made a visible light absorbing film composite with the claimed limitations as taught in the instant application.

8. Claims 4, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strickler, in view of Oliver, as applied to Claims 1-5 above, and further in view of the Japanese Patent Publication of Toshiharu et al. (JP 10-182190; hereinafter "Toshiharu").

9. Strickler, in view of Oliver, teaches a glass sheet on which a metallic thin film has been formed (with all of the claimed limitation as discussed hereinabove), and that the metallic thin film can be an aluminum compound. However, Toshiharu, drawn to a transparent black electroconductive film, recites that the metallic thin film layer can contain aluminum, copper, or silver (see ¶ [0021]). Additionally, Toshiharu teaches that the film can also contain a pigment particles, such as titanium black and carbon black (see ¶ [0026]). As the references of Strickler, Oliver and Toshiharu are all drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention, to have used any of the metallic thin film layer taught by Toshiharu.

10. Neither Strickler, Oliver nor Toshiharu shows that the pigment particles have an average dispersed-particle diameter of 300 nm or less in the ink, as in Claim 7. However, such particle sizes are properties that can be easily determined by a person having ordinary skill in the art. With regard to the limitation of the particle size, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions fails to render claims patentable in the absence of unexpected results. The aforementioned limitations are optimizable as they directly affect the pigment layer of the visible light absorbing ink. It would have been obvious to a person having ordinary skill in the art, at the time of invention, to make the ink layer with the limitations of the pigment particle size since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strickler, in view of Oliver, as applied to Claims 1-5 above, and further in view of the Japanese Patent Publication of Masaaki et al. (JP 2000-238170; hereinafter "Masaaki").

12. Strickler, in view of Oliver, teaches a glass sheet on which a metallic thin film has been formed (with all of the claimed limitation as discussed hereinabove), and that the film layer can contain carbon black particles. Additionally, Masaaki, drawn to a transparent conductive film, provides that the film layer can additionally contain a dark-colored azo pigment (see ¶ [0016]). Since Strickler, Oliver and Masaaki are all drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention to have used the pigment taught by Masaaki.

13. Neither Strickler, Oliver nor Masaaki teaches that the pigment particles have an average dispersed-particle diameter of 300 nm or less in the ink, as in Claim 7. However, such particle sizes are properties that can be easily determined by a person having ordinary skill in the art. With regard to the limitation of the particle size, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions fails to render claims patentable in the absence of unexpected results. The aforementioned limitations are optimizable as they directly affect the pigment layer of the visible light absorbing ink. It would have been obvious to a person having ordinary skill in the art, at the time of

invention, to make the ink layer with the limitations of the pigment particle size since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 USPQ 215 (CCPA 1980).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,472,455	10/2002	Bleikolm et al.
US 5,332,888	07/1994	Tausch et al.
US 4,022,947	05/1977	Grubb et al.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571) 272-9056. The examiner can normally be reached on Monday - Friday, 9:00 AM - 5:00 PM EDT.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJJ
04/27/2007

RENA DYE
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